

VITA

David L. Strayer

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Date of Birth: September 12, 1957

Family: wife, Kay; sons Kyle & Sean

Educational History:

1989	Ph.D. University of Illinois at Urbana-Champaign Major: Experimental Psychology Minors: Quantitative, Biological
1982	M.S. Eastern Washington University Major: Experimental Psychology
1980	B.A. Eastern Washington University Majors: Psychology, History

Professional History

2004 – Present	Professor, Department of Psychology, University of Utah Adjunct Professor, Dept. of Educational Psychology, University of Utah
1995 - 2004	Associate Professor, Department of Psychology, University of Utah
1991 - 1995	Assistant Professor, Department of Psychology, University of Utah
1990 - 1991	Member of Technical Staff, Network Architecture and Services Laboratory, GTE Laboratories
1989 - 1990	Post-Doctoral Research Associate, Department of Psychology, University of Illinois at Urbana-Champaign
1982 - 1988	Teaching and Research Assistant, Department of Psychology, University of Illinois at Urbana-Champaign
1980 - 1982	Teaching and Research Assistant, Department of Psychology, Eastern Washington University

Awards

University of Utah Distinguished Scholarly and Creative Research Award, 2010
College of Social and Behavioral Sciences Superior Teaching Award Finalist, 2006, 2007, 2010
Discover Magazine's 100 Top Science Stories of 2005
John Park Teaching Fellowship, 2004
Discover Magazine's 100 Top Science Stories of 2003
College of Social and Behavioral Sciences Superior Research Award, 2002
John Park Teaching Fellowship, 1997
College of Social and Behavioral Sciences Superior Research Award Finalist, 1995 (Jr. Award)
Sigma Xi research paper award, 1988
Paul D. Doolen Graduate Scholar for the Study of Aging, 1987
NASA/AMES Research Fellowship, 1985-87
Outstanding academic student at Eastern Washington University, 1982
Debra White Memorial Scholarship for academic achievement, 1979

Research Interests

Attention
Skill Acquisition and Skilled Performance
Mathematical Modeling of Human Performance
Age-related Differences in Information Processing
Cognitive Psychophysiology
Cognition in the *Wild*

Teaching Interests

Cognitive Psychology
Sensation and Perception
Attention and Skill Acquisition
Human Factors and Engineering Psychology
Cognition in the *Wild*

Professional Organizations

American Psychological Society
The Psychonomic Society
The Human Factors Society

Editorial Duties and Service

Consulting Editor for *Perception and Psychophysics*, 1994-1999.

Consulting Editor for the *Journal of Experimental Psychology: Human Perception and Performance*, 1999-2004.

Consulting Editor for the *Journal of Experimental Psychology: Applied*, 2005-2009.

Consulting Editor for *Frontiers of Cognition* (2010)

Guest Editor for the special issue of *Human Factors* on driver distraction (2004).

Ad Hoc Reviewer for *Journal of Experimental Psychology: Learning, Memory, & Cognition*, *Journal of Experimental Psychology: Human Perception and Performance*, *Journal of Experimental Psychology: General*, *Psychonomic Bulletin & Review*, *Psychological Science*, *Perception and Psychophysics*, *Quarterly Journal of Experimental Psychology*, *Memory & Cognition*, *American Journal of Psychology*, *Journal of Accident Analysis & Prevention*, *Human Factors*.

Member of the *NASA Life and Biomedical Sciences and Applications* Division-wide Peer Review Panel, 1994-1995.

Member of the Utah Legislative *Task Force on Inattention and Driving* (1999).

Participant at the *National Distracted Driving Summit* in Washington DC (2009, 2010)

Testifying in committees of the *Utah State Legislature* (2009, 2010)

United States House and Senate briefings on Driver Distraction (5/5/10 and 5/6/10)

Director of the Center for the Prevention of Distracted Driving (2010)

Research Support

University of Illinois dissertation research grant, 1988, \$750.

National Institute of Health, "Aging and the Development of Automatic Processing", 1989-1990, \$38,050 (co-principal investigator with A. Kramer).

National Institute of Health, "Development of Skilled Performance in the Elderly", 1991-1993, \$213,636 (co-principal investigator with A. Kramer).

University Research Committee Grant, "Separating Strategic and Automatic Components of Skill Acquisition and Skilled Performance", 1991. \$5000.

National Institute of Health, "An Information Processing Approach to Autism", 1994-1999, \$520,038 (co-investigator with S. Ozonoff).

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University Research Committee Grant, “ERP Studies of Novel Popout”, 1995. \$5000.

University Research Instrumentation Grant, 1996. \$8000.

University Research Committee Grant, “Event-related Brain Potential Studies of the Negative Priming Effect”, 1998. \$6000.

National Institute of Health: Bioengineering Research Partnership, “Data Display to Detect/Diagnose/Treat Critical Events”, 1999-2004, \$2,221,179 (co-principal investigator with Dwayne Westenskow et. al.).

National Institute of Mental Health, “The Deautomatization of Attitudes”, 2000-2002, \$149,500 (co-investigator with David M. Sanbonmatsu).

National Aeronautics and Space Administration, “Graphic Displays to Facilitate Rapid Discovery, Diagnosis, and Treatment of Medical Emergencies”, 2001-2002, \$100,000. (co-investigator with Frank Drews et. al.).

Federal Aviation Administration, “Alcohol, Divided Attention, Performance, and Gene Expression”, 2002, \$30,633.

Utah Department of Transportation, “Simulator Training of Maintenance Workers”, 2003-2004, \$195,173.

National Institute of Child Health and Human Development, Cell-phone-induced distraction in adolescent drivers, 2005-2006, \$140,500 (Co-investigator with Michael Kramer)

Utah Department of Transportation, “Targeted and Adaptive Simulator Training for Winter Maintenance”, 2005-2006, \$77,010.

Idaho National Laboratory, “Brains and Chips: System for Analyzing Differences in Imagery”, 2005, \$85,122.

Interdisciplinary Research Grant, “Meet the Super Taskers: Identifying Genetic and Neural Markers of Extraordinary Cognitive Reserve”, 2009, \$12,000 (Co-PI with Jason Watson)

Publications

Coles, M. G. H., & Strayer, D. L. (1985). The psychophysiology of the cardiac cycle time effect. In Orlebeke, J. F., Mulder, G., & van Doornen, L. J. P. (Eds.), *Psychophysiology of Cardiovascular Control*. New York: Plenum Press, pp. 517-534.

Strayer, D. L., Wickens, C. D., & Braune, R. (1987). Adult age differences in the speed and capacity of information processing II: An electrophysiological approach. *Psychology and Aging*, 2, 99-110.

- Kramer, A. F., & Strayer, D. L. (1988). Assessing the development of automatic processing: An application of dual-task and event-related brain potential methodologies. *Biological Psychology, 26*, 231-267.
- Strayer, D. L., & Kramer, A. F. (1990). Attentional requirements of automatic and controlled processing. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 16*, 67-82.
- Strayer, D. L., & Kramer, A. F. (1990). An analysis of memory-based theories of automaticity. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 16*, 291-304.
- Kramer, A. F., Strayer, D. L., & Buckley, J. (1990). Development and transfer of automatic processing. *Journal of Experimental Psychology: Human Perception and Performance, 16*, 505-522.
- Kramer, A. F., Strayer, D. L., & Buckley, J. (1991). Task versus component consistency in the development of automatic processing: A psychophysiological assessment. *Psychophysiology, 24*, 425-437.
- Mecklinger, A., Kramer, A. F., & Strayer, D. L. (1992). Event related potentials and EEG components in a semantic memory search task. *Psychophysiology, 29*, 104-119.
- Kramer, A. F., Coyne, J. T., & Strayer, D. L. (1993). Cognitive function at high altitude. *Human Factors, 35*, 329-344.
- Sirevaag, E. J., Kramer, A. F., Wickens, C. D., Reisweber, M., Strayer, D. L., & Grenell, J. H. (1993). Assessment of pilot performance and mental workload in rotary wing aircraft. *Ergonomics, 9*, 1121-1140.
- Strayer, D. L., & Kramer, A. F. (1994). Strategies and automaticity I: Basic findings and conceptual framework. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 20*, 318-341.
- Strayer, D. L., & Kramer, A. F. (1994). Strategies and automaticity II: Dynamic aspects of strategy adjustment. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 20*, 342-365.
- Ozonoff, S., Strayer, D. L., McMahon, W., & Fillous, F. (1994). Executive function abilities in autism and Tourette syndrome: An information processing approach. *Journal of Child Psychology and Psychiatry, 35*, 1015-1032.
- Kramer, A. F., Humphrey, D. G., Larish, J. F., Logan, G. D., & Strayer, D. L. (1994). Aging and inhibition: Beyond a unitary view of inhibitory processing in attention. *Psychology and Aging, 9*, 491-519.

- Strayer, D. L., & Kramer, A. F. (1994). Aging and skill acquisition: Learning-performance distinctions. *Psychology and Aging, 9*, 589-605.
- Kramer, A. F., Larish, J., & Strayer, D. L. (1995). Training strategies for attentional control in dual-task settings: A comparison of young and old adults. *Journal of Experimental Psychology: Applied, 1*, 50-76.
- Malley, G. B., & Strayer, D. L. (1995). Effects of stimulus repetition on positive and negative identity priming. *Perception and Psychophysics, 57*, 657-667.
- Strayer, D. L. (1996). Skill acquisition. In J. E. Birren (Ed.) *Encyclopedia of Gerontology: Age, Aging, and the Aged*, Academic Press, Orlando FL (pp. 489-495).
- Ozonoff, S., & Strayer, D. L. (1997). Inhibitory function in nonretarded autistic children. *Journal of Autism and Developmental Disorders, 27*, 59-76.
- Strayer, D. L. (1997). Testing race models of visual search. *Journal of Experimental Psychology: Human Perception and Performance, 23*, 566-581.
- Johnston, W. A., Strayer, D. L., & Vecera, S. P. (1998). Broad mindedness and perceptual flexibility: Lessons from dynamic ecosystems. In J. S. Jordan (Ed.) *Systems Theory and a Priori Aspects of Perception*, Elsevier (pp. 87-103).
- Ozonoff, S., Strayer, D. L., McMahon, W. M., & Filloux, F. (1998). Inhibitory deficits in Tourette syndrome as a function of comorbidity and severity. *Journal of Child Psychology and Psychiatry, 39*, 1109-1118.
- Strayer, D. L., & Grison, S. (1999). Negative identity priming is contingent on stimulus repetition. *Journal of Experimental Psychology: Human Perception and Performance, 25*, 24-38.
- Gardner, M. K., Strayer, D. L., Woltz, D. J., & Hill, R. D. (2000). Cognitive skill acquisition, maintenance, and transfer in the elderly. In R. D. Hill, L. Backman, & A. S. Neely (Eds.) *Cognitive Rehabilitation in Old Age*, Oxford University Press, New York, NY (pp. 42 - 60).
- Strayer, D. L., & Johnston, W. A. (2000). Novel popout is an attention-based phenomenon: An ERP analysis. *Perception and Psychophysics, 62*, 459-470.
- Ozonoff, S., & Strayer, D. L. (2001). Brief Report: Further evidence of intact working memory in autism. *Journal of Autism and Developmental Disorders, 31*, 257-263.
- Grison, S., & Strayer, D. L. (2001). Negative priming and perceptual fluency: More than what meets the eye. *Perception and Psychophysics, 63*, 1063-1071.

Strayer, D. L., & Johnston, W. A. (2001). Driven to distraction: Dual-task studies of simulated driving and conversing on a cellular phone. *Psychological Science*, 12, 462-466.

(The Strayer & Johnston (2001) article listed above will be reprinted in Robinson-Riegler, M. B., & Robinson-Riegler, G. L., (Eds) (2004). *Readings in Cognitive Psychology: Applications, Connections, and Individual Differences*. Boston: Allyn & Bacon.)

Kramer, A. F., & Strayer, D. L. (2001). Influence of stimulus repetition on negative priming. *Psychology and Aging*, 16, 580-587.

Strayer, D. L., Drews, F. A., Albert, R. W., & Johnston, W. A. (2001). Cell phone induced perceptual impairments during simulated driving. In D. V. McGehee, J. D. Lee, & M. Rizzo (Eds.) *Driving Assessment 2001: International Symposium on Human Factors in Driver Assessment, Training, and Vehicle Design*. Published by the Public Policy Center, University of Iowa (pp. 14-19).

Johnston, W. A., & Strayer, D. L. (2001). A dynamical, evolutionary perspective on attention capture. In C. Folk & B. Gibson (Eds.), *Attraction, Distraction and Action; Multiple Perspectives on Attentional Capture*. Elsevier (pp. 375-397).

Syroid, N.D., Agutter, J., Drews, F. A., Westenskow, D. R., Albert, R. W., Bermudez, J. C., Strayer, D. L., Prenzle, H., Loeb, R. G., & Weinger, M. B. (2002). Development and evaluation of a graphical anesthesia drug display. *Anesthesiology*, 96, 565-574.

Filoteo, J. V., Rilling, L. R., & Strayer, D. L. (2002). Negative priming in patients with Parkinson's Disease: Evidence for a role of the striatum in inhibitory attentional processes. *Neuropsychology*, 16, 230-241.

Strayer, D. L., Drews, F. A., & Albert, R. W. (2002). Negative priming and stimulus repetition: A reply to Neill and Joordens (2002). *Perception and Psychophysics*, 64, 861-865.

Strayer, D. L. (2002). Review of engineering psychophysiology: Issues and applications. *Psychophysiology*, 39, 406-407. [Book Review]

Strayer, D. L., Drews, F. A., & Johnston, W. A. (2003). Cell phone induced failures of visual attention during simulated driving. *Journal of Experimental Psychology: Applied*, 9, 23-52.

Agutter, J., Drews, F. A., Syroid, N.D., Westenskow, D. R., Albert, R. W., Strayer, D. L., Bermudez, J. C., & Weinger, M. B. (2003). Evaluation of a graphical cardiovascular display in a high fidelity simulator. *Anesthesia & Analgesia*, 97, 1403-1413.

Strayer, D. L. & Drews, F. A. (2003). Effects of cell phone conversations on younger and older drivers. In the *Proceedings of the 47th Annual Meeting of the Human Factors and Ergonomics Society* (pp 1860-1864).

Strayer, D. L., Drews, F. A., & Crouch, D. J. (2003). Fatal distraction? A comparison of the cell-phone driver and the drunk driver. In D. V. McGehee, J. D. Lee, & M. Rizzo (Eds.) *Driving Assessment 2003: International Symposium on Human Factors in Driver Assessment, Training, and Vehicle Design*. Published by the Public Policy Center, University of Iowa (pp. 25-30).

Strayer, D. L., & Drews, F. A. (2003). Simulator training improves driver efficiency: Transfer from the simulator to the real world. In D. V. McGehee, J. D. Lee, & M. Rizzo (Eds.) *Driving Assessment 2003: International Symposium on Human Factors in Driver Assessment, Training, and Vehicle Design*. Published by the Public Policy Center, University of Iowa (pp. 190-193).

Strayer, D. L., Cooper, J. M., & Drews, F. A. (2004). What do drivers fail to see when conversing on a cell phone? In the *Proceedings of the 48nd Annual Meeting of the Human Factors and Ergonomics Society* (pp 2213-2217).

Drews, F. A., Pasupathi, M., & Strayer, D. L.. (2004). Passenger and cell-phone conversations in simulated driving. In the *Proceedings of the 48nd Annual Meeting of the Human Factors and Ergonomics Society* (pp 2210-2212).

Strayer, D. L., Drews, F. A., & Burns, S. (2004). The development and evaluation of a high-fidelity simulator training program for snowplow operators (US Federal Highway Administration report #UT-04.17).

McCarley, J. S., Vais, M., Pringle, H., Kramer, A. F., Irwin, D. E., & Strayer, D. L. (2004). Conversation disrupts scanning and change detection in complex visual scenes. *Human Factors*, 46, 424-436.

Strayer, D. L. & Drews, F. A. (2004). Profiles in driver distraction: Effects of cell phone conversations on younger and older drivers. *Human Factors*, 46, 640-649.

Lee, J. D., & Strayer, D. L. (2004). Preface to the special section on driver distraction. *Human Factors*, 46, 583-586.

Strayer, D. L., Drews, F. A., Crouch, D. J., & Johnston, W. A. (2005). Why do cell phone conversations interfere with driving? In W. R. Walker and D. Herrmann (Eds.), *Cognitive Technology: Essays on the Transformation of Thought and Society*. McFarland & Company Inc., Jefferson, NC. (pp.51-68).

Strayer, D. L., Drews, F. A., & Burns, S. (2005). The development and evaluation of a high-fidelity simulator training program for snowplow operators. In D. V. McGehee, J. D. Lee, & M. Rizzo (Eds.) *Driving Assessment 2005: International Symposium on Human Factors in Driver Assessment, Training, and Vehicle Design*. Published by the Public Policy Center, University of Iowa (pp. 456-462).

- Drews, F. A., Syroid, N., Agutter, J., Strayer, D. L., & Westenskow, D. R. (2006). Drug delivery as a control task: Improving patient safety in anesthesia. *Human Factors*, *48*, 85-94.
- Strayer, D. L., Drews, F. A., & Crouch, D. J. (2006). Comparing the cell-phone driver and the drunk driver. *Human Factors*, *48*, 381-391.
- Strayer, D. L., Martinez, M., Cooper, J. M., & Drews, F. A. (2006). Brain waves suppressed by cell phone conversations. In the *Proceedings of the 50th Annual Meeting of the Human Factors and Ergonomics Society* (pp 2364-2367).
- Possin, K. L., Cagigas, X. E., Strayer, D. L., & Filoteo, J. V. (2006). Lack of impairment in patients with Parkinson's Disease on an object-based negative priming task. *Perceptual and Motor Skills*, *102*, 219-230.
- Strayer, D. L. (2007). Multi-tasking in the automobile. In A. Kramer, D. Wiegmann & A. Kirlik (Eds.) *Applied Attention: From Theory to Practice*. (pp. 121-133). Oxford University Press,
- Strayer, D. L., & Drews, F. A. (2007). Attention. In F. Durso, R. Nickerson, S. Dumais, S. Lewandowsky and T. Perfect (Eds.), *Handbook of Applied Cognition, Second Edition* (pp. 29-54). John Wiley & Sons, Ltd., West Sussex, UK.
- Strayer, D. L. & Cooper, J. M. (2007). Aging and skill acquisition. In J. E. Birren (Ed.) *Encyclopedia of Gerontology: Age, Aging, and the Aged*, Academic Press, Orlando FL (pp. 490-495).
- Drews, D. A., Picciano, P., Agutter, J., Syroid, N., Westenskow, D. R., & Strayer, D. L. (2007). Development and evaluation of a just-in-time support system. *Human Factors*, *49*, 543-551.
- Strayer, D. L., & Drews, F. A. (2007). Cell-phone induced inattention blindness. *Current Directions in Psychological Science*, *16*, 128-131.
- Cooper, J. M., & Strayer, D. L. (2007). Driving impairments from concurrent cell-phone use do not diminish with practice. . In the *Proceedings of the 51st Annual Meeting of the Human Factors and Ergonomics Society* (pp 1536-1539).
- Miller, A. E., Strayer, D. L., & Marble, J. L. (2007). Neurotechnology for imagery analysis. In the *Proceedings of the 51st Annual Meeting of the Human Factors and Ergonomics Society* (pp 1363-1367).
- Drews, F. A., Pasupathi, M., & Strayer, D. L. (2008). Passenger and cell-phone conversation during simulated driving. *Journal of Experimental Psychology: Applied*, *14*, 392-400.
- Cooper, J. M., & Strayer, D. L. (2008). Effects of simulator practiced and real-world experience on cell-phone related driver distraction. *Human Factors*, *50*, 893-902.

- Johnson, K. B., Syroid, N. D., Drews, F. A., Ogden, L. L., Strayer, D. L., Pace, N. L., Tyler, D.L, White, J.L., & Westenskow, D. R. (2008). Part task and variable priority training in first year anesthesia resident evaluation: A combined didactic and simulation based approach to improve management of adverse airway and respiratory events. *Anesthesiology*, 108, 831-840.
- Grier, R., Wickens, C., D., Kaber, D., Strayer, D. L., Boehm-Davis, D., Trafton, G. J., & St John, M. (2008). The red-line of workload: Theory, research, and design. In the *Proceedings of the 52nd Annual Meeting of the Human Factors and Ergonomics Society* (pp 1204-1208).
- Strayer, D. L., Cooper, J. M., & Drews, F. A. (2009). Profiles in cell-phone induced driver distraction. In D. Fisher, J. Lee, J. Caird, & M. Rizzo (Eds) *Handbook of Driving Simulation for Engineering, Medicine, and Psychology*.
- Drews, F. A., & Strayer, D. L. (2009). Cellular phones and driver distraction. In M.A. Regan, J. D. Lee, & K.L. Young (Eds.) *Driver Distraction: Theory, Effects, and Mitigation* (pp. 169-190). John Wiley & Sons, Ltd. West Sussex, UK.
- Cooper, J. M., Vladislavljevic, I., Medeiros-Ward, N., Martin, P. T., & Strayer, D. L. (2009). Near the tipping point of traffic stability: An investigation of driving while conversing on a cell phone in simulated highway traffic of varying densities. *Human Factors*, 51, 261- 268.
- Drews, F. A., Yazdani, H., Godfrey, C., Cooper, J. M., & Strayer, D. L. (2009). Text messaging during simulated driving. *Human Factors*, 51, 762-770.
- Strayer, D. L. & Cooper, J. M. (2010). Cell phones and driver distraction. In B. Goldstein (Ed.) *The SAGE Encyclopedia of Perception*.
- Strayer, D. L., Medeiros-Ward, N., & Cooper, J. M. (2010). Multi-tasking and human performance. In H. Pashler (Ed.) *The SAGE Encyclopedia of Mind*.
- Watson, J. M., & Strayer, D. L. (2010). Supertaskers: Profiles in extraordinary multi-tasking ability. *Psychonomic Bulletin and Review*. 17, 479-485.
- Logan, G. D., Miller, A. E., & Strayer, D. L. (2010). Electrophysiological evidence for parallel response selection in skilled typists. *Psychological Science*, xx, xxx-xxx.
- Watson, J. M., Miller, A. E., Lambert, A., & Strayer, D. L. (in press). The magical letters P, F,C, and sometimes U: The rise and fall of executive attention with the development of prefrontal cortex. In K. Fingerman, C. Berg, T. Antonucci, & J. Smith (Eds.), *Handbook of Lifespan Psychology*, Springer.

Strayer, D. L., Drews, F. A., & Johnston, W. A. (In Press). The eye of the beholder: Cellular communication causes inattention blindness behind the wheel. In Gale, A. G., Taylor, S. P., & Castro, C. (Eds.), *Vision in Vehicles X*. Elsevier (pp. xx-xx).

Seegmiller, J. K., Watson, J. M., & Strayer, D. L. (In Press). Individual Differences in Susceptibility to Inattention Blindness. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, xx, xxx-xxx.

Strayer, D. L., Watson, J. M., & Drews, F. A. (In Press). Cognitive distraction while multitasking in the automobile. In B. Ross (Ed.), *The Psychology of Learning and Motivation, Vol. 54*, xxx-xxx.

Medeiros-Ward, N., Seegmiller, J. K., Watson, J. M., & Strayer, D. L. (Under Review). The neural bases of extraordinary multitasking.

Strayer, D. L., Cooper, J. M., & Drews, F. A. (Under Review). Part-task and variable priority simulator-based training for snowplow operators.

Friedrich, F. J., Strayer, D. L., Prenovitz, M., & Christiansen, S. (Unpublished Manuscript). ERP evidence for prime task effects in semantic priming.

Strayer, D. L., & Grison, S. (Unpublished Manuscript). On the locus of negative identity priming.

Invited Published Commentaries

Strayer, D. L., Drews, F. Albert, R. & Johnston, W. (2001). Does cell phone conversation impair driving performance? *National Safety Council Official Newsletter of the Consortium for Injury and Disability Research (August/September issue)* pp. 1-2.

Strayer, D. L., & Johnston, W. A. (2001). Should individuals be able to conduct business on the phone while driving? Invited commentary for *Utah Business Magazine*.

Strayer, D. L., Drews, F., & Johnston, W. (2003). Inattention blindness behind the wheel. *National Safety Council Official Newsletter of the Consortium for Injury and Disability Research (February/March issue)* pp. 1-7.

Strayer, D. L., Drews, F. A., & Johnston, W. A. (2003). Are we being driven to distraction? In the University of Utah Center for Public Policy and Analysis' *Public Policy Perspective*, 16, 1-2.

Abstracts and Proceedings

- Williams, W. C., Parsons, R. L., & Strayer, D. L. (1980). Classical discrimination conditioning using the solutions to verbal and spatial problems as CSs: Bilateral measures of electrodermal excitation and inhibition. *Psychophysiology*, *18*, 148.
- Blackwood, P. J., Williams, W. C., Strayer, D. L., & Stowell, M. M. (1982). Amnesia for CS-UCS relationships during hypnosis: Effects on SCR discrimination performance. *Psychophysiology*, *19*, 307.
- Strayer, D. L., & Macias, A. M. (1982). WAVE: A FORTRAN IV algorithm for analyzing skin conductance response data. *Psychophysiology*, *19*, 590.
- Strayer, D. L., Karis, D., Coles, M. G. H., & Donchin, E. (1984). P300 latency and reaction time are dissociated in a Sternberg task. *Psychophysiology*, *21*, 600.
- Mane, A. M., Coles, M. G. H., Karis, D., Strayer, D. L., and Donchin, E. (1984). The design and use of subtasks in part training and their relationship to the whole task. *Proceedings of the 20th Annual Conference on Manual Control*.
- Braune, R., Wickens, C. D., Strayer, D. L., & Stokes, A. F. (1985). Age-dependent changes in information processing abilities between 20 and 60 years. In Swezey, R. W. (Ed.), *Proceedings of the Human Factors Society, 29th Annual Meeting*. pp. 226-230, Baltimore, MD.
- Strayer, D. L., Wickens, C. D., & Braune, R. (1985). Mental chronometry and aging: An additive factors/psychophysiological approach. *Psychophysiology*, *22*, 615.
- Strayer, D. L., & Kramer, A. F. (1986). Psychophysiological indices of automaticity and attentional resources. *Psychophysiology*, *23*, 466.
- Strayer, D. L., Coles, M. G. H., Buckley, J., & Donchin, E. (1986). Stimulus repetition effects: Evidence for processes in cascade. *Psychophysiology*, *23*, 466.
- Gehring, W. J., Strayer, D. L., Kramer, A. F., Donchin, E., & Miller, G. A. (1987). An evaluation of age differences in the development of automaticity. *Proceedings of the 4th International Conference of Neurosciences*, Paris-Dourdan, France.
- Kramer, A. F., & Strayer, D. L. (1987). P300 operating characteristics: Performance/ERP analysis of dual-task demands and automaticity. *Proceedings of the 4th International Conference of Neurosciences*, Paris-Dourdan, France.
- Kramer, A. F., Strayer, D. L., & Liu, Y. (1988). The role of consistency in the development of automatic processing. *Proceedings of the 11th Psychology in the Department of Defense Symposium*, pp. 266-270, Colorado Springs, CO.

- Strayer, D. L., Gehring, W. J., Kramer, A. F., & Miller, G. A. (1988). Adult age differences in the development of automaticity: A psychophysiological assessment. *Proceedings of the 11th Psychology in the Department of Defense Symposium*, pp. 271-275, Colorado Springs, CO.
- Buckley, J., Kramer, A. F., & Strayer, D. L. (1988). Component task consistency and automatic processing. *Psychophysiology*, 25, 437-438.
- Strayer, D. L., Buckley, J., & Kramer, A. F. (1988). The role of the response criterion in automatic processing. *Psychophysiology*, 25, 484-485.
- Kramer, A. F., Strayer, D. L., & Buckley, J. (1989). Factors influencing the development and transfer of automatic processing. *Proceedings of the Human Factors Society, 33rd Annual Meeting*, pp. 1248-1252.
- Mecklinger, A., Kramer, A. F., & Strayer, D. L. (1990). Memory search processes: An analysis of event-related brain potentials and EEG components. *Psychophysiology*, 27, S51.
- Kramer, A. F., Coyne, J. T., & Strayer, D. L. (1991). Human performance at the roof of North America. *Proceedings of the Human Factors Society, 35th Annual Meeting*, pp. 561-565.
- Kramer, A. F., & Strayer, D. L. (1991). Separating strategic and data-driven components of skilled performance. *Proceedings of the 32nd Annual Meeting of the Psychonomics Society*, p. 50.
- Strayer, D. L. (1992). The power law of attention capture. *Proceedings of the 33rd Annual Meeting of the Psychonomics Society*, p. 31.
- Kramer, A. F., Humphrey, D., Larish, J., Strayer, D. L., Logan, G. D., Pringle, H. (1992). Aging and inhibitory control. *Paper presented at the 4th Cognitive Aging Conference*, Atlanta, GA.
- Larish, J., Kramer, A., DeAntonna, J., & Strayer, D. L. (1993). Aging and dual-task training. *Proceedings of the Human Factors Society, 37th Annual Meeting*, Seattle, WA.
- Strayer, D. L., & Kramer, A. F. (1993). Strategies and automaticity: Implications for part-task training. *Proceedings of the Human Factors Society, 37th Annual Meeting*, Seattle, WA.
- Malley, G. B., & Strayer, D. L. (1993). The time course of automatic and non-automatic information processing. *Proceedings of the 34th Annual Meeting of the Psychonomics Society*, p. 43.
- Humphrey, D. G., Kramer, A. F., & Strayer, D. L. (1994). Negative priming and aging: The effects of pacing and the number of distractors. *Paper presented at the 6th Cognitive Aging Conference*, Atlanta, GA.

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- Prenovitz, M., Friedrich, F. J., & Strayer, D. L. (1996). ERP evidence of automatic lexical activation. *Paper presented at the Cognitive Neurosciences Meeting*, San Francisco, CA.
- Vecera, S. P., Strayer, D. L., & Chamberlain, S. (1996). ERP indices of object-based visual attention. *Proceedings of the 37th Annual Meeting of the Psychonomics Society*, 1, 27.
- Strayer, D. L., & Grison, S. (1997). Towards an activation model of negative priming. *Proceedings of the 38th Annual Meeting of the Psychonomics Society*, 2, 69.
- Friedrich, F. J., Strayer, D. L., & Christensen, S. M. (1997). ERP evidence of prime task effects on semantic priming. *Proceedings of the 38th Annual Meeting of the Psychonomics Society*, 2, 7.
- Strayer, D. L., & Grison, S. (1998). Converging evidence for the locus of inhibition in negative identity priming. *Paper presented at the 8th Annual Meeting of Brain, Behavior, and Cognitive Science*, Ottawa, Canada.
- Grison, S., & Strayer, D. L. (1998). ERP evidence for the locus of negative priming. *Proceedings of the 39th Annual Meeting of the Psychonomics Society*, 3, 5.
- Strayer, D. L., Johnston, W. A., & Grison, S. (1999). Driven to distraction: Dual task studies of driving and cellular phone use. *Proceedings of the 40th Annual Meeting of the Psychonomics Society*, 4, 16.
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- Syroid, N. D., Westenskow, D. R., Agutter, A., Bermudez, J. C., Albert, R. W., Drews, F. A., & Strayer, D. L. (2001). Development and evaluation of a graphical anesthesia drug display. *Paper presented at the Society for Technology in Anesthesia*.
- Agutter, J., Syroid, N. D., Drews, F., Westenskow, D. R., Bermudez, J. C., & Strayer, D. L. (2001). Anesthesia monitor usability testing protocol. *Paper presented at the Society for Technology in Anesthesia*.
- Agutter, J., Syroid, N., Drews, F.A., Westenskow, D.R., Bermudez, J., and Strayer D.L., (2001). Graphic Data Display for Cardiovascular System Case Study. *Proceedings of the IEEE Symposium on Information Visualization 2001 (INFOVIS'01)*.

- McCarley, J. S., Vais, M., Pringle, H., Kramer, A. F., Irwin, D. E., & Strayer, D. L. (2001). Conversation disrupts visual scanning of traffic scenes. *Paper presented at Vision in Vehicles*, Australia.
- Drews, F. A., Agutter, J., Syroid, N. D., Albert, R. W., Westenskow, D. R., & Strayer, D. L. (2001). Evaluating a graphical cardiovascular display for anesthesia. *Proceedings of the 41st Annual Meeting of the Human Factors Society*.
- Albert, R. W., Drews, F. A., Strayer, D. L., Syroid, N. D., Westenskow, D. R., Agutter, J., Loeb, R. G., & Weinger, M. B. (2001). Facilitation of anesthetic administration during simulated surgeries with a drug display. *Proceedings of the 41st Annual Meeting of the Human Factors Society*.
- Strayer, D. L., Drews, F. A., & Albert, R. A. (2001). Negative priming and perceptual facilitation. *Proceedings of the 42nd Annual Meeting of the Psychonomics Society*, 6, 113.
- Strayer, D. L. (2002). Why do cell phone conversations interfere with driving? *Presented at the 81st Annual Meeting of the Transportation Research Board*, Washington, DC.
- Drews, F.A., Westenskow, D.R., Syroid, N., Strayer, D.L., Albert, R., Agutter, J., Bermudez, J. (2002). Seeing is believing? Utility ratings of monitoring technologies. *Presentation at the Annual Society of Technology in Anesthesia Meeting*.
- Strayer, D. L., Drews, F. A., & Johnston, W. A. (2003). Inattention-blindness behind the wheel. Paper presented at the 3rd Annual Meeting of Vision Sciences Society, Sarasota, FL.
- Drews, F. A., Strayer, D. L., Smith, T., & Uchino, B. N. (2003). Precursors to road rage: A psychophysiological investigation. In D. V. McGehee, J. D. Lee, & M. Rizzo (Eds.) *Driving Assessment 2003: International Symposium on Human Factors in Driver Assessment, Training, and Vehicle Design*. Published by the Public Policy Center, University of Iowa (pp. 194-198).
- Drews, F. A., Syroid, N. D., Agutter, J., Westenskow, D. R., & Strayer, D. L. (2003). Increasing intraoperative patient safety: Monitoring drug concentrations. In the *Proceedings of the 47nd Annual Meeting of the Human Factors and Ergonomics Society* (pp. 1438-1442).
- Drews, F. A., Syroid, N. D., Agutter, J., Snell, D., Balikrishnan, S., Lingutla, S., Westenskow, D. R., & Strayer, D. L. (2003). Development and evaluation of just-in-time training to provide cardio-pulmonary resuscitation: Monitoring drug concentrations. In the *Proceedings of the 47nd Annual Meeting of the Human Factors and Ergonomics Society* (pp. 1507-1510).
- Drews, F. A., Strayer, D. L., Uchino, B. N., & Smith, T. W. (2003). The road to road rage. *Paper presented at Vision in Vehicles*, Granada, Spain.

- Strayer, D. L., Drews, F. A., & Johnston, W. A. (2004). Seeing, attending, and remembering while driving. *Proceedings of the 45th Annual Meeting of the Psychonomics Society*, 9, 37.
- Albert, R., Syrod, N., Zhang, Y., Agutter, J., Drews, F., Strayer, D., Hutchinson, G., & Westenskow, D. (In Press). Psychophysiological scaling of a cardiovascular information display. *Proceedings of the IEEE Symposium on Information Visualization*.
- Johnston, K., Drews, F., Strayer, D., Tyler, D., Ogden, L., White, J., Malen, M., Mortensen, W., Lu, E., Larsen, J., Poulson, J., Balakrishnan, S., Lingulta, S., Syroid, N., & Westenskow, D. (2005). Introduction of a part task and variable priority training in first year anesthesia resident education: A combined didactic and simulation based approach to improve management of adverse respiratory events. *Proceedings of the International Meeting on Medical Simulation, Miami, FL*.
- Syroid, N., Tyler, D., Ogden, L., White, J., Drews, F., Strayer, D., Mortenson, W., Malan, M., Lu, E., Larsen, J., Poulson, J., Balikrishnon, S., Lingutla, S., Westenskow, D., & Johnston, K. (2005). Exploration of partial task and variable priority training for anesthesia residents to improve management of adverse respiratory events: Preliminary results. *Proceedings of the International Meeting on Medical Simulation, Miami, FL*.
- Strayer, D. L., & Watson, J. M. (2009). Supertaskers: Extraordinary ability in multitasking. *Proceedings of the 50th Annual Meeting of the Psychonomics Society*, Boston, MA.
- Miller, A. E., Watson, J. M., & Strayer, D. L. (2009). Individual differences in cognitive control unveiled by components of the ERP. *Proceedings of the 50th Annual Meeting of the Psychonomics Society*, Boston, MA.
- Lambert, A. Watson, J. M., & Strayer, D. L., (2010). The roles of working memory capacity, visual attention, and age in driving performance. *Proceedings of the 51th Annual Meeting of the Psychonomics Society*, San Francisco, CA.
- Medeiros-Ward, N., Cooper, J. M., Doxon, A. J., Strayer, D. L., & Provancher, W. R. (2010). Bypassing the bottleneck: The advantage of fingertip shear feedback for navigational cues. *Proceedings of the 51th Annual Meeting of the Psychonomics Society*, San Francisco, CA.

Invited Presentations and Workshops

- Strayer, D. L., & Williams, W. C. (1981) SCORIT 1980. *Paper presented at the twenty-first annual meeting of the Society for Psychophysiological Research, Washington, D. C.*
- Williams, W. C., Strayer, D. L., & Macias, A. M. (1981). A tentative comparison of four computing routines for scoring electrodermal data. *Paper presented at the twenty-first annual meeting of the Society for Psychophysiological Research, Washington, D. C.*

Invited participant in the *Seventh Annual Carmel Conference on Cognitive Psychophysiology: Magnetic and electrical event-related brain activity as a tool in the study of cognitive function, Carmel CA (1985)*.

Kramer, A. F., & Strayer, D. L. (1988). Symposium on automatic processing. *Paper presented at the 96th Annual APA Conference, Atlanta, GA.*

Strayer, D. L., & Kramer, A. F. (1989) Symposium on aging and skill acquisition. *Paper presented at the 97th Annual APA Conference, New Orleans, LA.*

Kramer, A. F., & Strayer, D. L. (1990). Symposium on automatic information processing: Theory and application. *Paper presented at the 98th Annual APA Conference, Boston, MA.*

Strayer, D. L., & Kramer, A. F. (1990). Microstrategic behavior: Strategic aspects of skilled performance. *Paper presented at the 34th Annual Human Factors Conference, Orlando, FL.*

Strayer, D. L. (1993). Primed popout and the power law of attention capture. *Paper presented at the 3rd West Coast Attention Meeting, Eugene, OR.*

Kramer, A. F., Larish, J. F., & Strayer, D. L. (1994). Training strategies for attentional control in dual-task settings: A comparison of young and old subjects. *Paper presented at the conference on Converging Operations in the Study of Visual Selective Attention, Urbana IL.*

Schwartz, I. S., Wilson-Leff, C., Malley, G. B., Strayer, D. L., & Johnston, W. A. (1994). ERP indices of novel popout. *Paper presented at the conference on Converging Operations in the Study of Visual Selective Attention, Urbana IL.*

Malley, G. B., & Strayer, D. L. (1994). Effects of stimulus repetition on positive and negative priming. *Paper presented at the conference on Converging Operations in the Study of Visual Selective Attention, Urbana IL.*

Strayer, D. L. (1996). Aging and skill acquisition. *Colloquium presented at Brigham Young University. December 2, 1996.*

Strayer, D. L. (1998) Converging operations in the study of negative priming. *Colloquium presented at the University of Illinois at Urbana-Champaign. June 12, 1998.*

Strayer, D. L., & Drews, F. A. (2003). Simulation of cell-phone induced driver distraction. *Paper presented at the Society for Automotive Engineering International Government/Industry Meeting, Washington, D.C.*

Strayer, D. L. (2003). Are we being driven to distraction? *Colloquium presented to General Motors Co., Detroit, MI, June 6, 2003.*

- Strayer, D. L., Drews, F. A., & Johnston, W. A. (2003). Distracted while driving. Invited presentation at the conference on *Cognitive Technology: Transforming Throughout Society*, Winston-Salem State University, June 14, 2003.
- Strayer, D. L. (2003). Why do cell phone conversations interfere with driving? *Colloquium presented at Texas Tech University, Lubbock, TX, November 14, 2003.*
- Strayer, D. L. (2003). Developing Integrated Graphical Support Systems for Anesthesiology: An Interdisciplinary Approach. *Colloquium presented at Texas Tech University, Lubbock, TX, November 14, 2003.*
- Strayer, D. L. (2004). A comparison of the cell phone driver and the drunk driver. Invited presentation at the *Stanford Institute for Economic Policy Research and the AEI-Brookings Joint Center for Regulatory Studies Conference on Communications Policy*, October 9, 2004.
- Strayer, D. L. (2004). Why do cell phone conversations interfere with driving? Invited presentation at Whitman College, October 19, 2004.
- Strayer, D. L. (2005). The logic of the distracted driver. Paper presented at the Transportation Research Board workshop *Development of Standardized Descriptions of Driving Simulator Scenarios: Human Factors Considerations*. Washington D.C., January 9, 2005.
- Strayer, D. L. (2005). Multi-tasking in the automobile: Why do cell phone conversations interfere with driving? Invited keynote presentation at the Mid-South Psychology Conference. Memphis, TN, February 19, 2005.
- Strayer, D. L. (2005). Multi-tasking in the automobile. Invited presentation at the 57th annual meeting of the *American Academy of Forensic Sciences*. New Orleans, LA February 22, 2005.
- Strayer, D. L. (2005). Multi-tasking in the automobile: Cell phones and the distracted driver. Invited presentation at *Attention: From Theory to Practice*, a festschrift in honor of Christopher D. Wickens, Champaign, IL, June 18, 2005.
- Strayer, D. L. (2005). Cell phone use and driver distraction. Invited presentation at the annual meeting of the *Governors Highway Safety Association*, Norfolk, VA, August 29, 2005.
- Strayer, D. L., (2005). Teens and driver distraction. Invited presentation at the annual meeting of the *Biological Basis of Pediatric Practice Symposium "Childhood Injury: Our Largest and Most Deadly Epidemic"*, Park City, UT, September 11, 2005.
- Strayer, D. L., (2005). Driven to Distraction. Invited presentation at the International Conference on Distracted Driving, Toronto, Canada, and October 2, 2005.

Strayer, D. L. & Drews, F. A. (2005). Technology and driver distraction. Invited presentation at the Utah Public Risk Managers meeting, Sandy, UT October 12, 2005.

Strayer, D. L. (2005). Cell phones: Assessing the real risks and workable strategies for safety. Invited presentation to the ORC Worldwide Executive Business Issues Forum Meeting, Chicago, IL, October,13, 2005.

Strayer, D. L. (2006). Dual-task studies of simulated driving and conversing on a cell phone. Invited colloquium in the Department of Educational Psychology, University of Utah, March 6, 2006.

Strayer, D. L. (2006). Training strategies to support performance in complex operational environments. Invited presentation to the ORC Worldwide Executive Business Issues Forum Meeting, Ft. Lauderdale, FL, April 6, 2006.

Strayer, D. L. (2006). Driver perception while conversing on a cell phone. Presentation at the American Psychological Association, August 10, 2006.

Strayer, D. L. (2006). Cell phones and driver distraction. Presentation at the American Psychological Association, August 11, 2006.

Strayer, D. L., (2006). Cell Phones and Driver Distraction. Presentation given at the Greater Avenues Community Council, Salt Lake City, UT, September 6, 2006.

Strayer, D. L. (2006). Multitasking on the Information Superhighway: Why Using a Cell Phone Makes You Drive Like You're Drunk. Grand Rounds, University of Utah, Salt Lake City, UT, November 21, 2006.

Strayer, D. L. (2007). Cell Phones and Driver Distraction. Presented at the National Safety Council (Traffic Safety Coalition), Washington D.C., February 28, 2007.

Strayer, D. L. (2007). Multitasking on the Information Superhighway: Why Using a Cell Phone Makes You Drive Like You're Drunk. Invited Rocky Mountain Psychological Association Battig Memorial Lecture, Denver, CO, April 13, 2007.

Strayer, D. L. (2008). The multitasking teen driver. Invited presentation at the New Mexico Department of Transportation Safety Summit, Albuquerque, NM March 12, 2008.

Strayer, D. L. (2008) Attention and dual-task control in natural settings. American Psychological Association, Boston, MA, August 17, 2008.

Strayer, D. L. (2009) The Multi-tasking Driver: Are we being driven to distraction. Invited presentation at Vanderbilt University, Nashville, TN April 1, 2009.

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